

*Transmitted Via Facsimile to (571) 273-8300*

PATENT  
Atty. Dkt. No.: C4-971C (SPLG 23336-17)

IN THE CLAIMS:

1. (currently amended) A method for detecting a moving object of interest, having a characteristic with a predetermined value, in a field of view of a motion video camera using a video signal received from the motion video camera, said method comprising the steps of:

receiving an object qualifying parameter representative of the characteristic with the predetermined value of the moving object of interest;

receiving an indication of a selected monitoring area in said field of view;

detecting moving objects within said selected monitoring area to determine the value of the characteristic of the moving object of interest for each detected moving object;

determining if a value of the characteristic for each detected moving object is within a predefined tolerance of the predetermined value of the moving object of interest; and

generating an indication of detected moving objects having the value of the characteristic within the predefined tolerance.

2. (canceled)

3. (original) The method of claim 1 wherein said object detection parameter is selected from the group consisting of color, velocity, position, acceleration, and size.

4. (currently amended) A method for reducing information in a video signal having a plurality of frames received from a motion video camera with a field of view, wherein each of said frames has a data set, said method comprising:

receiving an indication of a selected monitoring area in said field of view;

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detecting moving objects in the selected monitoring area of the field of view of the motion video camera;

selecting objects of interest from said detected moving objects; and

creating a data set for each frame of the plurality of frames in the video signal based on detected moving objects.

5. (original) The method of claim 4 further including the steps of:

receiving an object qualifying parameter representative of a characteristic of a predetermined value of a moving object of interest;

determining the value of the characteristic of the moving object of interest for each object of interest;

determining if a value of the characteristic for each detected moving object is within a predefined tolerance of the predetermined value of the moving object of interest; and

wherein the step of selecting includes the step of automatically selecting detected moving objects having the value of the characteristic within the predefined tolerance.

6. (original) The method of claim 4 wherein the step of selecting object of definitions includes receiving an indication of at least one selected object of interest.

7. (original) The method of claim 4 wherein the step of creating said data set includes the steps of:

determining if a current frame of the plurality of frames contains at least one selected object of interest;

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if said current frame contains at least one selected object of interest, generating a data representation of said at least one selected object of interest and associating said data representation with said data set of said current frame; and

if said current frame does not contain at least one selected object of interest, marking said data set for said current frame as empty.

8. (original) The method of claim 4 wherein said object detection parameter is selected from the group consisting of color, velocity, position, acceleration, and size.

9. (canceled)

10. (original) The method of claim 4 wherein the step of creating a data set includes the steps of:

determining a present position and velocity of each selected object of interest; and

predicting a future position of each selected object of interest based on said present position and velocity.

11. (currently amended) A computer readable medium having stored thereon computer-executable instructions for detecting a moving object of interest, having a characteristic with a predetermined value, in a field of view of a motion video camera using a video signal received from the motion video camera performing the steps of:

receiving from a user an object qualifying parameter representative of the characteristic with the predetermined value of the moving object of interest;

detecting moving objects to determine the value of the characteristic of the moving object of interest for each detected moving object;

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determining if a value of the characteristic for each detected moving object is within a predefined tolerance of the predetermined value of the moving object of interest; and

generating an indication of detected moving objects having the value of the characteristic with the predefined tolerance.

12. (original) The computer readable medium of claim 11 further including the step of receiving an indication of a selected monitoring area in said field of view and wherein said step of detecting is performed in said monitoring area.

13. (original) The computer readable medium of claim 11 wherein said object detection parameter is selected from the group consisting of color, velocity, position, acceleration, and size.

14. (currently amended) A computer readable medium having stored thereon computer-executable instructions for reducing information in a video signal having a plurality of frames received from a motion video camera with a field of view, wherein each of said frames has a data set, performing the steps of

detecting moving objects in the field of view of the motion video camera;

selecting receiving a user selection of objects of interest from said detected moving objects; and

creating a data set for each frame of the plurality of frames in the video signal base on detected moving objects.

15. (currently amended) The computer readable medium of claim 1428 further including the steps of :

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receiving an object qualifying a parameter representative of a characteristic of a predetermined value of a moving object of interest, wherein detected moving objects have the characteristic of the moving object of interest;

determining if a value of the characteristic for each detected moving object is within a predefined tolerance of the predetermined value of the moving object of interest; and

wherein the step of selecting includes the step of automatically selecting detected moving objects having the value of the characteristic within the predefined tolerance.

16. (currently amended) The computer readable medium of claim ~~1428~~ wherein the step of selecting object definitions includes receiving an indications of at least one selected object of interest.

17. (currently amended) The computer readable medium of claim ~~1428~~ wherein the step of creating said data set includes the steps of:

determining if a current frame of the plurality of frames contains at least one selected object of interest;

if said current frame contains at least one selected object of interest, generating a data representation of said at least one selected object of interest and associating said data representation with said data set of said current frame; and

if said current frames does not contain at least one selected object of interest, marking said data set for said current frame as empty.

18. (currently amended) The computer readable medium of claim ~~1428~~ wherein said object detection parameter is selected from the group consisting of color, velocity, position, acceleration, and size.

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19. (currently amended) The computer readable medium of claim 1428 further including the step of receiving an indication of a selected monitoring area in said field of view; and wherein said step of detecting is performed in said monitoring area.

20. (currently amended) The computer readable medium of claim 1428 wherein the step of creating a data set includes the steps of:

determining a present position and velocity of each selected object of interest; and

predicting a future position of each selected object of interest based on said present position and velocity.

21. (currently amended) A system for detecting a moving object of interest, having a characteristic with a predetermined value, using a video signal received from a motion video camera representing a field of view of the motion video camera, said system comprising:

an input device for receiving from a user an object qualifying parameter representative of the characteristic with the predetermined value of the moving object of interest;

object detection means for detecting moving objects to determine the value of the characteristic of the moving object of interest for each detected moving object; and

a comparator for generating an indication of detected moving objects having the value of the characteristic within a predefined tolerance of the predetermined value of the moving object of interest.

22. (original) The system of claim 21 wherein said object detection means includes means for receiving an indication of a selected monitoring area in said selected monitoring area in said field of view in which object detection is to be performed.

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23. (currently amended) A system for reducing information in a video signal having a plurality of frames received from a motion video camera having a field of view, wherein each of said frames has a data set, said system comprising:

object detection means for detecting moving objects in the field of view of the motion video camera, wherein said object detection means includes means for receiving an indication of a selected monitoring area in said field of view in which object detection is to be performed;

a selector for determining objects of interest from said detected moving objects; and

means for creating a data set for each frame of the plurality of frames in the video signal based on detected moving objects.

24. (original) The system of claim 23 further including:

a comparator for receiving an object qualifying parameter representative of a characteristic of a predetermined value of a moving object of interest and generating an indication of detected moving objects having the value of the characteristic within a predefined tolerance of the predetermined value of the moving object of interest, wherein said selector includes means for automatically selecting detected moving objects indicated by output of said comparator.

25. (canceled)

26. (original) The system of claim 23 wherein said means for creating further includes:

a path detector for predicting a future position of each selected moving object based on determined present position and velocity.

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27. (previously presented) A method for reducing information in a video signal having a plurality of frames received from a motion video camera with a field of view, wherein each of said frames has a data set, said method comprising:

detecting moving objects in the field of view of the motion video camera;

selecting objects of interest from said detected moving objects; and

creating a data set for each frame of the plurality of frames in the video signal based on detected moving objects by determining if a current frame of the plurality of frames contains at least one selected object of interest; and

if said current frame contains at least one selected object of interest, generating a data representation of said at least one selected object of interest and associating said data representation with said data set of said current frame; and

if said current frame does not contain at least one selected object of interest, marking said data set for said current frame as empty.

28. (previously presented) A computer readable medium having stored thereon computer-executable instructions for reducing information in a video signal having a plurality of frames received from a motion video camera with a field of view, wherein each of said frames has a data set, performing the steps of

detecting moving objects in the field of view of the motion video camera;

selecting objects of interest from said detected moving objects; and

creating a data set for each frame of the plurality of frames in the video signal based on detected moving objects by determining if a current frame of the plurality of frames contains at least one selected object of interest; and

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if said current frame contains at least one selected object of interest, generating a data representation of said at least one selected object of interest and associating said data representation with said data set of said current frame; and

if said current frame does not contain at least one selected object of interest, marking said data set for said current frame as empty.

29. (new) A method in accordance with claim 27 wherein said data representation comprises a statistical representation.

30. (new) A method in accordance with claim 29 wherein said statistical representation is based at least in part on a qualifier value specific to each selected object of interest and movement and position information.

31. (new) A method in accordance with claim 29 wherein said statistical representation comprises at least one of (i) a display size as determined by a bounding box, (ii) current, predicted and past position information (iii) current, predicted and past velocity information, (iv) current predicted and past acceleration information, and (v) color.